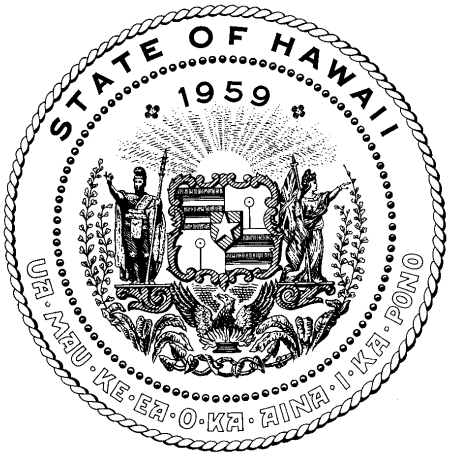
REPORT TO THE TWENTY-FOURTH LEGISLATURE
REGULAR SESSION OF 2007

REQUESTING A REPORT ON A 3-YEAR PLAN FOR BEACH RESTORATION AND STUDIES & PROJECTS



PREPARED BY:
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

IN RESPONSE TO:
SECTION 84.4 of ACT 160, SESSION LAWS OF HAWAII, 2006

NOVEMBER 2006

REQUESTING A REPORT ON A 3-YEAR PLAN FOR BEACH RESTORATION STUDIES AND PROJECTS

I. PURPOSE OF THE REPORT

This report is submitted in response to Section 84.4 of Act 160, Session Laws of Hawaii 2006, of the Twenty-Third Legislature of the State of Hawaii, Regular Session 2006. The Act requests the Department of Land and Natural Resources (Department) to provide a report on a 3-year plan for beach restoration studies & projects. This report provides an overview of the Department's efforts to implement beach restoration projects and studies to support such efforts. This report has two components. First is a discussion of the Department's efforts to create a comprehensive management plan to conserve and restore Hawaii's important beaches. Second is a discussion of existing and proposed studies and beach restoration projects being conducted by the Department.

The Department's Office of Conservation and Coastal Lands (OCCL) is currently preparing a Hawaii Beach Management Plan (HBMP). The HBMP is intended to address and implement several polices of the State related to beach conservation pursuant to Part VIII (Restoration of Beach Lands) of Chapter 171, Hawaii Revised Statutes (HRS). The HBMP is intended to provide a rational process for allocating funds for beach conservation and restoration efforts. As envisioned in the statutes, the Plan "shall guide the Board of Land and Natural Resources (BLNR) in identifying those beach lands in need of restoration which have been degraded as a result of natural or human activities…The department may also institute other studies as necessary to support the development of beach restoration projects, including the development of socio-economic profiles, environmental studies pertaining to sand source analysis, and ecological effects of beach restoration, cost-benefit analysis for project viability, and coastal engineering studies including data gathering."

The HBMP is intended to identify site-specific management tools and strategies for an efficient response to erosion and allocation of limited resources. The HBMP will help justify the allocation of funds and may serve as a lever to obtain additional funds for beach restoration statewide.

The HBMP will be comprehensive and prescribe appropriate management actions to protect and maintain threatened beaches throughout Hawaii. Beach restoration is not the appropriate management tool for every threatened or degraded beach. Many beaches that are at risk can be saved through other means or management approaches, some of which have been described in the Hawaii Coastal Erosion Management Plan (COEMAP). COEMAP was adopted by the BLNR in 2000 as a comprehensive, but general plan to balance beach conservation and shoreline development. COEMAP provided a series of strategic recommendations to be implemented over time. It is believed that the HBMP will be one of the important implementation tools envisioned in COEMAP to conserve and restore beaches. .

Problem Statement

The current State of the Science analysis of environmental factors and phenomena that affect the shoreline areas of Hawaii is both grim and promising. Grim, because the current paradigm is rising sea-levels, accelerating according to current scientific data; increases in both mean global atmospheric and ocean temperatures; net continental ice loss due to melting in both the Greenland Ice Sheet and the West Antarctic Ice Sheet; increasing magnitude of North Pacific waves; and, increased erosion and inundation on the shorelines of Hawaii. For all this, there is still promise. Promise that increased scientific understanding of the current scenario and improved predictive capability for the future allow modern governments better decision making information than ever before in the history of mankind.

Hawaii, unique within the United States of America for many reasons, is exceptional for its geology. A lonely archipelago perched in the middle of the Pacific Ocean, surrounded by water, with 100% of its residents living in coastal counties, is especially susceptible to even the most minute of changes in oceanographic conditions. With no point in the Islands greater than 29 miles distant from the ocean, the population lives in the tentative space afforded by the Islands, between the highest peaks and the encroaching waters of the Pacific Ocean. This limited area is impacted by numerous oceanographic hazards that range in duration from very rapid (tsunamis) to day/week (hurricanes and tropical storms) to annual (seasonal surf) to decadal or longer (coastal erosion). Surprisingly, this environment is the primary concern of only 1% of Hawaii's voters, has no legislative caucus, has no uniform program for resource protection and shoreline development, and is in day to day practice regulated by a multitude of various government agencies at all levels of government, working toward different goals and servicing different stakeholders. This highlights the need for a comprehensive long-term planning tool that identifies implementation strategies on a beach-to-beach basis that promotes clear goals or objectives for the conservation of beach resources throughout the State.

The State needs to identify beaches as a legacy resource to be passed on to the future generations, and create a tool set to enable that process. The first step is to solve the current problem of *ad hoc* management and lack of interagency coordination. To achieve this, Hawaii will need to implement the HBMP, unfalteringly agreed to and administered by the county, state, and federal agencies. Thus, HBMP serves as an integrated shoreline action plan to conserve and restore beaches through cooperative regulatory and non-regulatory actions.

The HBMP shall identify and evaluate management options for the coastal regions of Hawaii, assess its current condition and relationship to the upland area, and identify a complete set of development and planning options appropriate for the beach system. The HBMP shall approach planning, development, and future options from a comprehensive, integrated regional planning perspective that assesses each coastal region like an individual sediment system and coastal environment. Each coastal region will have a detailed description:

- Identifying its general geology and geomorphology;
- Of its relationship to the upland region;
- Of its current stage of development and state (urban, pristine, healthy, diminished, etc.)
- For responding to coastal erosion, including but not limited to beach nourishment, land acquisition, hard and soft erosion control structures, rezoning, and retreat;
- For future development standards for undeveloped parcels;
- For redevelopment standards for new building, renovations, consolidations, and subdivisions;
- For acceptable activities within the Special Management Area, the shoreline setback area, and the Conservation District; and
- For the coastal resource's priority and rank in relationship to adjacent and abutting infrastructure requirements, as they pertain to various governmental agencies and in consideration of the current and future development plans.

Creation of the HBMP will not change either the management scheme currently in place or restructure control of the planning process. The HBMP will provide a single, comprehensive document and implementation tools that all management agencies will reference for any land use applications for that coastal region, and will help guide the Department on the allocation of resources towards beach restoration and preservation. This will eliminate the *ad hoc* process that is currently in place, and remove both the interagency and developer/agency conflicts that arise from an absence of a unified plan.

It is envisioned that the HBMP will be completed in approximately two years.

Discussion of existing and proposed studies and beach restoration projects being conducted by the Department.

In addition to the Hawaii Beach Management Plan, the Department is involved in other studies and projects.

- The Department is presently implementing and managing the Kuhio Beach Nourishment Project at Waikiki. The Project will "recycle" 10,000 cubic yards of marine sand by hydraulically pumping sand from 2,000 feet offshore to Kuhio Beach. This effort was previously postponed due to environmental and seasonal surf conditions but is currently scheduled to start in October, 2006.
- The Department is the local sponsor for an Army Corps of Engineers, Federal Shore Protection Project (Section 227) to design and create a beach protection project demonstrating new and innovative techniques at Sacred Falls, Oahu.
- The Department is facilitating and regulating five (5) beach restoration projects through the Small Scale Beach Restoration streamlined permit.
- The Department is requesting funds in the Fiscal Year 08-09 biennium budget for plans, permitting, and construction of major improvements in Waikiki including the area from the Waikiki Aquarium to the Outrigger Reef Hotel.

- The Department is the local sponsor for an Army Corps of Engineers Federal Regional Sediment Management Plan on the windward side of Oahu.
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The Department is collaborating with private consulting engineers and local sand quarries to identify viable sand sources for beach restoration, including potentially large deposits offshore of the reef runway at the Honolulu International Airport. OCCL is assessing the possibility of conducting a sandy substrate study to determine the suitability of this offshore deposit for Hawaiian beaches, and will involve an economic feasibility study to determine production costs.

II. CONCLUSION

Over the next three years, the Department intends to develop a comprehensive strategy for conservation and restoration of the State's legacy beaches and critically eroding beaches. In addition, the Department will be performing and planning major beach improvements in Waikiki and assisting private sector interest in the restoration of degraded beaches around the State, including Kaanapali Beach on Maui. The Department is working in partnership with the University of Hawaii, the Federal Government, and private consulting firms to generate necessary coastal data to support planning and implementation of beach conservation efforts. The Department also hopes to partner with private interest to develop at least one significant area as a sand source for beach restoration projects.